~~Top Secret~~

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PHOTOGRAPHIC
INTERPRETATION
REPORT

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INTERPRETATION CENTER

SOVIET SS-16/-20 TRENDS AND DEVELOPMENTS OCTOBER 1976--FEBRUARY 1978 (TSR)

~~Top Secret~~

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MARCH 1978

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PIR-009/78

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DISSEMINATION CONTROL ABBREVIATIONS

NOFORN	Not Releasable to Foreign Nationals
NOCONTRACT	Not Releasable to Contractors or Contractor/Consultants
PROPIN	Caution-Proprietary Information Involved
USIBONLY	USIB Departments Only
ORCON	Dissemination and Extraction of Information Controlled by Originator
REL	This Information has been Authorized for Release to

SOVIET SS-16/-20 TRENDS AND DEVELOPMENTS OCTOBER 1976—FEBRUARY 1978 (TSR)

INTRODUCTION

1. (TSR [redacted] This report summarizes significant mobile missile-related construction activity seen at ten deployed mobile IRBM bases, at two offensive missile test centers, and at an SS-20 production-related facility in the USSR from late October 1976 through mid-February 1978. Some trends and developments apparent in the construction of the ten deployed mobile bases are also discussed. This report updates a previous NPIC report [redacted] and includes two tables, a bar graph, five annotated photographs, and a location map. 25X1 25X1

IMAGERY ANALYSIS

Deployed Bases

2. (TSR) Major construction activity related to the deployment of the SS-20 mobile missile system, which began in late 1975, has been continuing. This activity has included the construction of six mobile bases at or near dismantled SS-7 ICBM launch sites—three at Drovyanaya and two at Novosibirsk in the eastern USSR and one in a very early stage of construction at Verkhnaya Salda in central USSR—and four mobile bases at SS-4 MRBM facilities in the western USSR (Figure 1). Three of the four bases at the MRBM facilities—Kozhanovichi, Konkovichi, and Postavy—are at SS-4 regimental launch sites; the fourth, which could also serve as an SS-20 training facility, is adjacent to an existing SS-4 training/barracks area at Mozyr.

3. (TSR) Although the layouts of the ten mobile bases vary, three distinct types of ground support equipment (GSE) garages are common to all; these are the single-bay, three-bay, and 11-bay drive-in garages (Table 1). At eight of the mobile bases, construction of the single-bay and three-bay garages has taken place inside the security fence of an existing SS-4 or SS-7 launch site. No consistent pattern has been observed in the placement of the 11-bay garages at the deployed bases.

4. (TSR) In mid-1977, however, a new development was observed when construction of all three types of garages was started for the first time just outside the existing site security fence at Mozyr (Figure 2). Although all three types of garages have been secured separately from the adjacent existing housing and support area, the construction of new security fences indicates that previously existing administration/barracks and other support buildings are being incorporated into the layout of this base. A rail-to-road transfer point (RRTP) has been under construction at the Mozyr base, which previously lacked a convenient or readily accessible RRTP.

5. (TSR) In late 1977, this construction practice was again observed when foundations for single- and three-bay garages were seen outside the security fence at a dismantled, three-silo SS-7 launch site in the Drovyanaya ICBM Complex. Two other mobile bases previously identified at this complex were constructed within existing SS-7 site security fences (Figure 3). It is too early to determine whether the Soviets will incorporate existing support buildings in the overall layout of the new base at Drovyanaya. However, based on past construction patterns some, if not all, of the old SS-7 support area could be incorporated as part of this new SS-20 base.

6. (TSR) A trend currently evident at the SS-20 bases is an increase in the number of single-bay garages from six to nine. This trend will probably reflect an eventual corresponding increase in the number of SS-20 transporter-erector-launchers (TELs) within each SS-20 launch area. This trend was first identified when nine single-bay garages were observed at the SS-20 bases at MRBM facilities in the western USSR.

7. (TSR) Initially the mobile missile bases identified at ICBM complexes contained only six single-bay garages, with foundations provided during original construction for three additional garages. It now appears that the trend which was started at Mozyr in the western USSR (Figure 2) will also extend to the SS-20 bases at the ICBM complexes. This belief is supported by evidence seen at Novosibirsk IRBM Mobile Base 1 where single-bay garage components are currently onsite for three additional garages. The six original single-bay garages had been externally completed at this base by July 1977. Because of the very early stage of construction of the mobile base at Verkhnaya Salda, the total number of single-bay garages to be constructed there cannot as yet be determined. The increase from six to nine single-bay garages at deployed SS-20 bases may account partly for the increase in the sightings of single-bay garage components at Bryansk Guided Missile Support Equipment Plant II (see Production Facilities).

(Continued p. 4)

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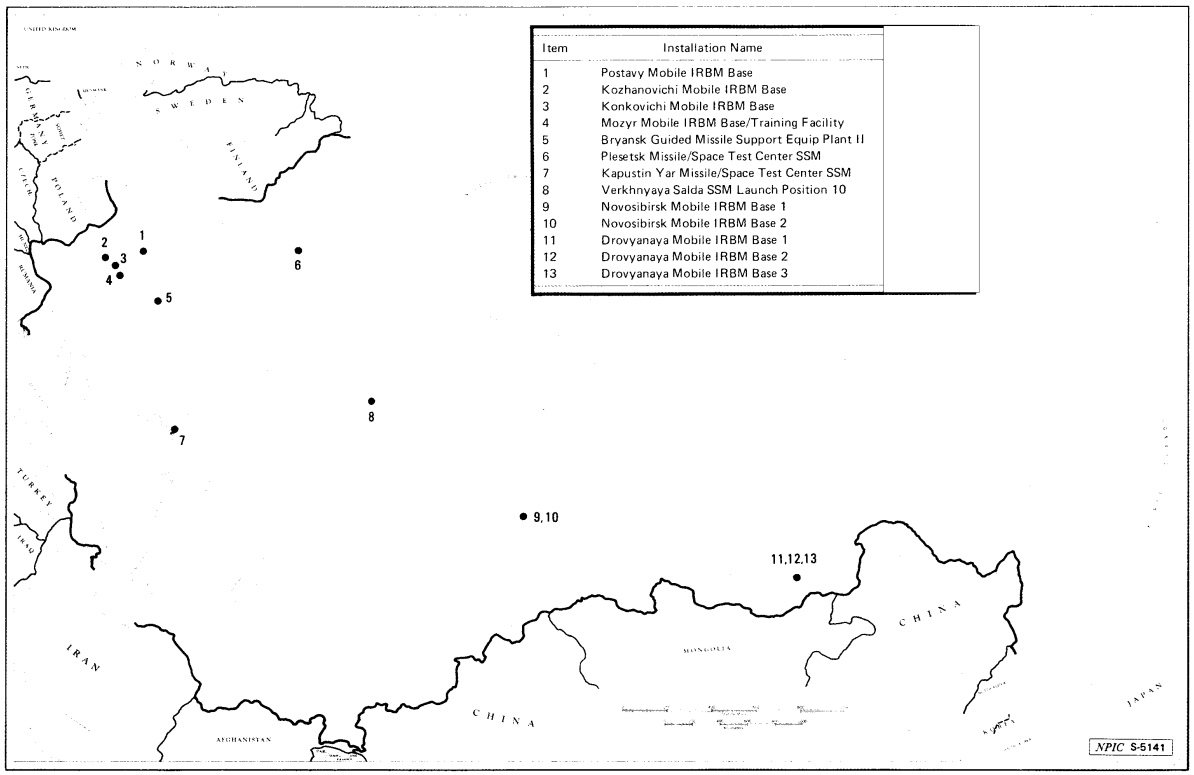

FIGURE 1. LOCATIONS OF SS-16/-20 CONSTRUCTION ACTIVITY, USSR

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Table 1. Summary of SS-20 Construction and Related Activity
This table in its entirety is classified TOP SECRET RUFF

	SSM Installation Name	Launch Area: Single-Bay Garage Number of Bldgs Complete	Launch Area: Single-Bay Garage Number of Bldgs Ucon	Launch Area: 3-Bay Garage Number of Bldgs Complete	Launch Area: 3-Bay Garage Number of Bldgs Ucon	Launch Area: 11-Bay Garage Number of Bldgs Complete	Launch Area: 11-Bay Garage Number of Bldgs Ucon	Launch Area Construction and/or modifications Complete	Support Area: 11-Bay Garage Number	Support Area: 11-Bay Garage Construction Complete	Support Area: Tech Support Bldg Number	Support Area: Tech Support Bldg Construction Complete	Support Area: High-Bay Bldg Number	Support Area: High-Bay Bldg Construction Complete	Support Area: Clerestory Bldg Number	Support Area: Clerestory Bldg Construction Complete	Number of Other Support Bldgs Ucon	RRTP: Status of Construction in RRTP	SS-20 Assoc Electronics: Number of 30-meter Towers or Masts	SS-20 Assoc Electronics: Location of Towers or Masts	Remarks/Comments
Eastern USSR	Dnovyanaya Mobile IRBM Base 1	6	0[a]	3	0	1	0	Yes	1	Yes	0	–	0	–	0	–	3	Single-bay garage components stacked along main rail spur; portion of all rail spur being replaced	2 towers	Support area	
	Dnovyanaya Mobile IRBM Base 2	6	0[a]	3	0	0	0	Yes	2	No	0	–	0	–	0	–	2		2 towers	Support area	
	Dnovyanaya Mobile IRBM Base 3	0	6-9	0	3	0	0	No	0	–	0	–	0	–	0	–	3				
Central USSR	Novosibirsk Mobile IRBM Base 1	6	3[b]	3	0	0	0	Yes[c]	2	Yes[d]	0	–	0	–	0	–	3	1 bldg ucon; 1 GSE transfer shed present	2 towers	Support area	
	Novosibirsk Mobile IRBM Base 2	0	6-9	0	3	0	0	No	1	No	0	–	0	–	0	–	None to date				
	Verkhnaya Salda SSM Launch Position 10	0	2	0	0	0	0	No	0	–	0	–	0	–	0	–	None to date		0		Single-bay foundations not present Sep 77
Western USSR	Konkovichi Mobile IRBM Base	9[e]	0	3	0	1	0	Yes[c]	2	Yes	1	Yes	1	Yes	1	No	4	Reconfiguration of the facility now appears to be almost complete; 1 short rail spur, 3 bldgs, and a POL storage tank have been added at the east edge of facility; 1 GSE transfer shed present	4 masts	Konkovichi MRBM Regt CP Bnk	
	Kozhanovichi Mobile IRBM Base	6	3	3	0	1	0	Yes	2	Yes	1	Yes	1	Yes	1	Yes	6	1 bldg and 2 POL storage tanks ucon; large amount of construction materials present; 1 GSE transfer shed present	2 masts	Kozhanovichi MRBM Regt Rcvr Sta/Brk/Hd	A C-shaped, poss command/commo bldg externally complete at the Regt Rcvr
	Mozyr Mobile IRBM Base Training Facility	9	0	3	0	0	0	Yes	2	Yes	1	Yes	1	Yes[f]	1	No	4	2 GSE transfer sheds are over a portion of the northern rail spur; footings for a 3rd shed are over the southern spur; addition of more bldgs likely	0		Entire operations area, support area, and RRTP being enclosed by an 2-meter-high board fence; a C-shaped, poss command/commo bldg nearly complete in the support area
	Postavy Mobile IRBM Base	9	0	3	0	0	0	Yes	1	No	0	No	0	No	0	No	4	2 rail spurs and at least 5 bldgs have been added; entire RRTP area is being enclosed by a board fence; 2 GSE transfer sheds also present	0		Clearings are near the 11-bay garage in the support area for poss payload assembly, high-bay, and technical support bldgs

[a] Foundations are present for 3 additional garages.
[b] Components are present for 3 additional garages.
[c] Number of sliding-roof garages being increased from 6 to 9.
[d] Parking apron still unpaved.
[e] This site includes 3 additional garages without a sliding-roof capability.

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8. (TSR) Another trend in the construction of SS-20 GSE buildings has been identified. Mobile bases being built at or near SS-4 facilities are receiving three support-type buildings that have not yet been seen at mobile bases under construction at ICBM complexes (Figure 4). The first of these buildings has been designated as a technical support building; a covered passageway extends from it to the second support-type building. The second is a high-bay building with two drive-in bays, and the third is clerestory, drive-through building. These thr 25X1
support-type buildings, along with other smaller buildings, are being constructed in an area adjacent to the launch area and are separately secured from both the launch area and the administration/barracks areas. At Konkovichi and Kozhanovichi where construction of these three buildings was in the most advanced stages, the technical support building, the high-bay building, and a open-sided shed are separately secured from the large clerestory building. 25X1
A POL storage area, an 11-bay garage, and other support buildings are in the area with the clerestory building. Until some type of GSE can be associated with the three support-type buildings, their specific function will remain unclear.

9. (TSR) These support-type buildings have not been constructed at the six mobile bases being built at ICBM complexes; the reason for their absence may not be known until all six bases have been completed.

10. (TSR) Other activity associated with mobile base deployment includes the continuing construction of miscellaneous support buildings at SS-4 RRTPs. Two enclosed rail-served sheds have been constructed at the new RRTP that will serve the Mozyr base/training facility (Figure 2). Sheds and canvas-covered frameworks have been seen over the rail lines at the Konkovichi, Postavy, and Kozhanovichi RRTPs.

11. (TSR) The small shedlike attachments to the single-bay garages were originally being attached to the single-bay garages at only Drovyanaya and Novosibirsk[2] but are currently part of the construction programs at three of the four bases in the western USSR. Because these structures contain windows and doors only large enough for personnel to enter, it is believed that they could possibly serve as alert/ready rooms for SS-20 crews. However, this theory does not explain the various sizes and shapes of these structures.

12. (TSR) The amount of physical security for the launch areas at the mobile bases will be greater than it was when the original systems occupied these installations. The best illustration of this increased security can be seen at Drovyanaya Mobile IRBM Base 1 where additional security fences have been placed around the launch area. At this base, a new four-gate security control system was installed at the site entrance/exit replacing the single-gate control system used for the SS-7.

Missile Test Centers

13. (TSR) At Kapustin Yar Missile and Space Test Center (MSTC), construction of SS-20 GSE garages and associated buildings, underway since early 1976, has continued in three major support areas. In comparing the GSE garages at Kapustin Yar with those seen at the deployed bases, only the 11-bay garage was observed at both the test center and the SS-20 bases. At Kapustin Yar there are nine- and six-bay garages (Figure 5) which have not been observed at any of the deployed bases. However, because of the number of bays and the size similarities, each nine-bay garage seen at Kapustin Yar could serve a function comparable to that of the three three-bay garages seen at the deployed SS-20 bases; each six-bay garage could be comparable in function to the six single-bay garages. Table 2 contains a complete listing of garage types, their locations, and construction status.

14. (TSR) Although construction at all three SS-20 support facilities at Kapustin Yar is incomplete, SS-20 crew training has apparently not been restricted. Most of the SS-20 GSE vehicular activity observed has been in four areas—in the motor pool of the bivouac/troop training area where the major pieces of SS-20 GSE are stored and in three mobile GSE training areas approximately 20 nautical miles north of the SS-20 support facilities. No SS-20 equipment has been observed at Kapustin Yar Medium Range Test Complex C, Site 2 25X1
This area probably serves as a field support area for SS-20 crews during training exercises.

15. (TSR) Construction was also continuing on a silo in the bivouac/troop training area. Imagery-derived evidence indicates that the function of this silo is related to some type of command and control.[3] No such silo has been identified at any of the deployed SS-20 bases or other mobile missile-related facilities.

16. (TSR) At Plesetsk MSTC construction has continued at four launch sites—one SS-8 soft, two SS-7 soft, and a three-silo SS-7 hard launch site. Footings for at least two possible multibay garages were seen at launch site 5 Those footings are the first ne 25X1

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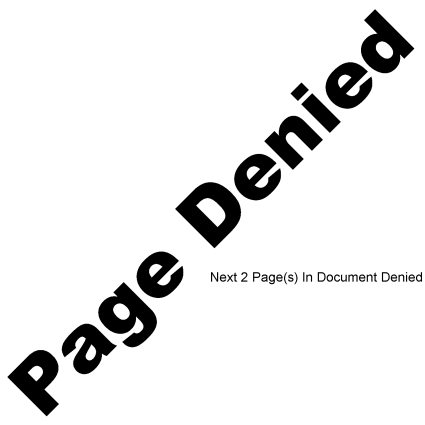

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Table 2. Mobile Missile-Associated Garages/Buildings at Soviet Test Centers
This table in its entirety is classified TOP SECRET RUFF

	Installation Name	Primary SS-16/-20 GSE Garages: Single-Bay Garage (nonsliding roof) Number of Bldgs Complete	Single-Bay Garage (nonsliding roof) Number of Bldgs Ucon	3-Bay Garage Number of Bldgs Complete	3-Bay Garage Number of Bldgs Ucon	6-Bay Garage Number of Bldgs Complete	6-Bay Garage Number of Bldgs Ucon	9-Bay Garage Number of Bldgs Complete	9-Bay Garage Number of Bldgs Ucon	11-Bay Garage Number of Bldgs Complete	11-Bay Garage Number of Bldgs Ucon	6-Meter-Deeper 11-Bay Garage Number of Bldgs Complete	6-Meter-Deeper 11-Bay Garage Number of Bldgs Ucon
Kapustin-Yar MSTC	Msl Rec/Inst/Stor Area	0	0	0	0	2	0	1	0	1	0	0	0
	MR/IRBM Biv/Trp Trng Area	0	0	0	0	1	0	1	1	0	1	0	0
	General Support Area	0	0	0	0	0	1	1	0	0	0	0	0
Plesetsk MSTC	Mobile ICBM Fac 1	6*	0	0	0	0	0	0	0	0	2 (see remarks)	1	0
	Mobile ICBM Fac 2	6*	0	0	0	0	0	0	3 (see remarks)	2	1 (see remarks)	1	0
	ICBM Launch Test Site 6	0	0	0	0	0	0	0	0	0	3	0	0
	ICBM Launch Test Site 5	0	0	1 (see remarks)	0	0	0	0	0	0	1 (prob)	0	0

		Other Mobile Missile-Assoc Support Bldgs: Drive-In High-Bay Number of Bldgs Complete	Drive-In High-Bay Number of Bldgs Ucon	Tech Support Number of Bldgs Complete	Tech Support Number of Bldgs Ucon	Clerestory Number of Bldgs Complete	Clerestory Number of Bldgs Ucon	Miscellaneous Number of Bldgs Complete	Miscellaneous Number of Bldgs Ucon	Remarks/Comments
Kapustin-Yar MSTC	Msl Rec/Inst/Stor Area	0	0	0	0	0	0	5	7	All new GSE garages at this fac have been complete since Apr 77; one of the two 6-bay garages was originally a 4-bay, rail-served bldg that was completely modified into a 6-bay garage by Apr 76
	MR/IRBM Biv/Trp Trng Area	0	0	0	0	0	0	2	4	This fac is the primary support and housing area for SS-20 crew training; two 30-meter lattice communications towers are in this fac, and a poss command/-control silo is ucon
	General Support Area	0	0	0	0	0	0	0	2	
Plesetsk MSTC	Mobile ICBM Fac 1	0	0	1 (poss--see remarks)	0	0	1	0	4	The two 11-bay garages are nearly complete; the poss technical support building, not a new bldg, is a probably modified SS-7 GSE 2-bay garage
	Mobile ICBM Fac 2	0	1 (see remarks)	0	0	0	1	0	2	The 9-bay garages and the drive-in, high-bay bldg are foundations only and construction on them has not progressed since mid-1977; construction on the 11-bay garage has been very slow
	ICBM Launch Test Site 6	0	0	0	0	0	0	0	0	The three 11-bay garages in the RIM area are nearly complete
	ICBM Launch Test Site 5	0	0	0	0	1	0	3	0	This 3-bay garage is a modified, partially bunkered GSE garage and is not identical to the 3-bay garage seen at deployed SS-20 bases; however, it could house the same type of GSE (MAZ-543 MSV)

*These six single-bay garages are similar to the single-bay garages at SS-20 mobile bases only in that they are single bay and drive in. These buildings are of standard Soviet design and are not unique in construction as are the sliding-roof garages at the deployed SS-20 bases.

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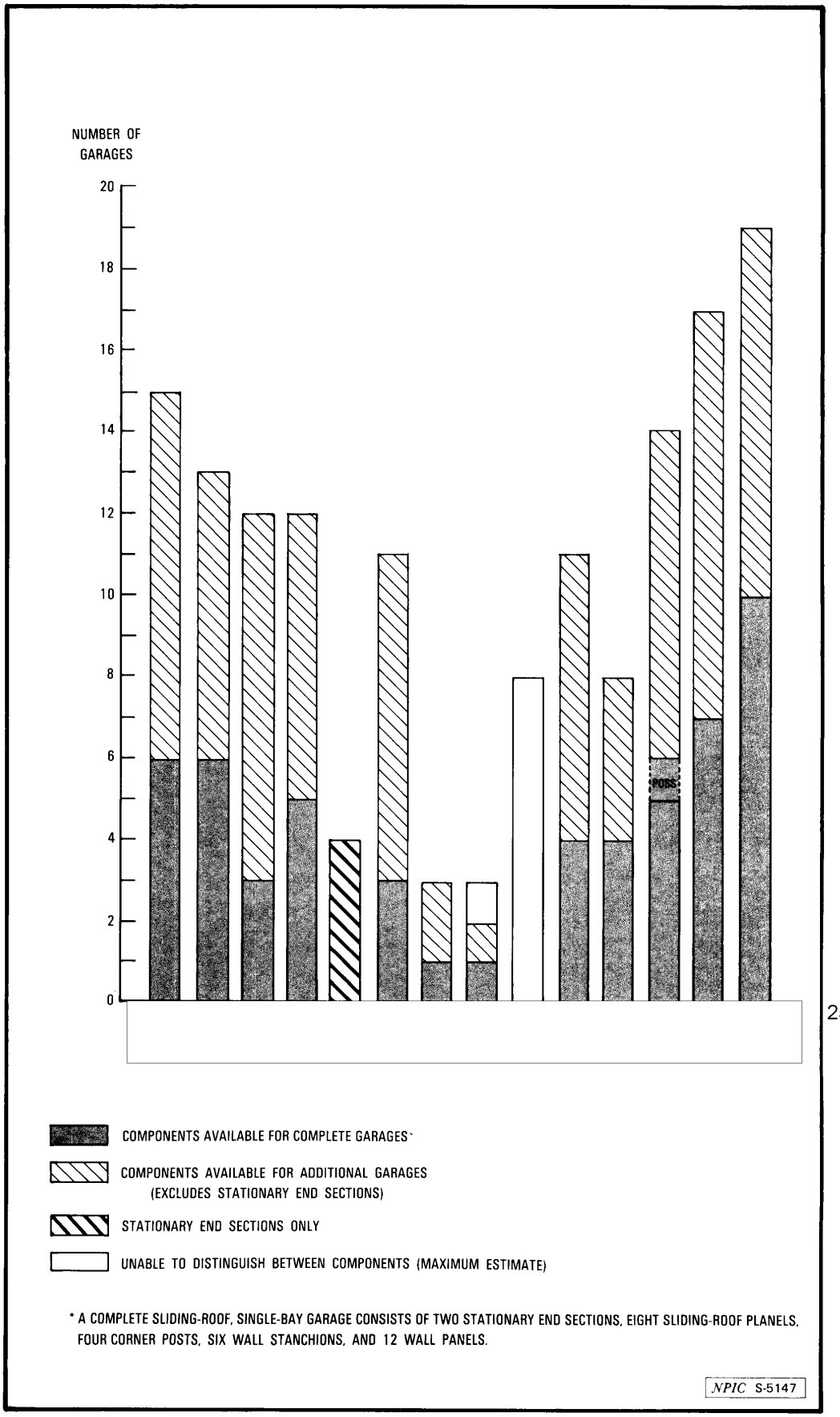

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FIGURE 7. SINGLE-BAY GARAGE COMPONENTS OBSERVED AT BRYANSK GUIDED MISSILE SUPPORT EQUIPMENT PLANT II, USSR

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construction/modification observed at this site since early 1976. Table 2 contains a complete listing of garage types at Plesetsk MSTC, their locations, and construction status.

17. (TSR) The mobile missile-related construction activity observed at the Plesetsk MSTC has resulted in a variety of building types and site layouts. Most notable is the construction of a building that thus far has only been seen at the Plesetsk MSTC. That building is an 11-bay garage (item 3, Figure 6) that is 6 meters deeper than the 11-bay garages observed at all other mobile missile-related facilities. Although the reason for the larger size of this garage is unknown, the garage could possibly be an identifying feature of the mobile SS-16 ICBM. Also at Plesetsk, only six single-bay garages have been built at each launch site (ICBM Mobile Facilities 1 and 2), and no indication that this number will be increased to nine has been observed. Further, these single-bay garages at Plesetsk are not distinctive in any way. They have no sliding-roof capability and are of standard Soviet design. A more detailed discussion of the differences in single-bay garages is contained in a previous NPIC report.[4]

18. (TSR) Four major GSE support buildings at Plesetsk are in various stages of construction and are similar, if not identical, to support buildings seen at some SS-20 facilities. The four types of buildings include a nine-bay garage, a clerestory building, a high-bay building, and a 66- by 18-meter, 11-bay garage that has been seen at all mobile missile facilities (Figure 6).

19. (TSR) No consistent pattern in the placement of these four types of buildings has been observed at Plesetsk. For example, foundations for three nine-bay garages, present since April 1977, have been seen only at Plesetsk ICBM Mobile Facility 2. Kapustin Yar is the only other mobile missile-related facility with nine-bay garages. At Kapustin Yar, nine-bay garages are in each of the three SS-20 support facilities.

20. (TSR) The clerestory buildings, seen either completed or under construction at Plesetsk, are at ICBM Mobile Facilities 1 and 2 and Launch Test Site 5. These clerestory buildings appear to be similar to the clerestory payload-handling buildings seen within the nuclear warhead areas serving the new SS-17, -18, and -19 multiple, independently targeted reentry vehicle (MIRV) ICBMs.

21. (TSR) The type of clerestory building seen at Plesetsk has not been constructed at Kapustin Yar MSTC but is under construction at the Kozhanovichi and Konkovichi (Figure 4) SS-20 mobile bases. A MIRV association with the clerestory buildings at Kozhanovichi and Konkovichi is supported by the fact that the SS-20 missile that is expected to be deployed there has a MIRV warhead. This MIRV association may not be valid for Plesetsk, however; the SS-16 ICBM has been tested with a single warhead only. Rather, the clerestory building at Plesetsk will probably be used for some form of vehicle maintenance. This is a more likely function for this building at Plesetsk since the large numbers of vehicles associated with both the SS-16 and the SS-20 mobile missile systems will undoubtedly require extensive vehicle maintenance facilities.

22. (TSR) The high-bay building at Plesetsk, which has two drive-in, 30- by 12-meter bays and is currently in an early stage of construction, has been seen at ICBM Mobile Facility 2 only. This building has not been observed at Kapustin Yar. When complete, this building at Plesetsk will be identical to the high-bay buildings seen in the specialized support areas at the Kozhanovichi and Konkovichi (Figure 4) SS-20 bases.

23. (TSR) The most common 11-bay garage (66 by 18 meters) is also present in various numbers at Plesetsk ICBM Mobile Facilities 1 and 2 and in the receiving, inspection, and maintenance (RIM) area at Launch Test Site 6. (Footings are currently under construction for a probable 11-bay garage at Launch Test Site 5.) The numbers of these garages at these locations (Table 2) suggest that the amount of existing garage space was inadequate to support the mobile missile system intended for deployment at these facilities.

Production Facilities

24. (TSR) Components for the SS-20 sliding-roof, single-bay garages are produced at Bryansk Guided Missile Support Equipment Plant II. Bryansk Plant II has been observed 28 times [redacted] 25X1
[redacted] 25X1
when SS-20 single-bay garage components were observed for the first time. On that date ten sliding-roof panels were observed. SS-20 garage components were not observed there again until [redacted] 25X1
(Figure 7), although the plant was seen a total of nine times during the intervening period.

25. (TSR) [redacted] 25X1
20 stationary end sections, 158 sliding-roof panels, 42 stacks of corner posts, 20 stacks of wall panels, nine stacks of wall stanchions, and two stacks of unidentified material were observed. This number of components is sufficient to assemble ten complete sliding-roof, single-bay garages with some components available for another nine garages. This is the largest number of SS-20 garage components ever observed at Bryansk. These components may be intended for mobile bases at Drovyanaya Mobile IRBM Base 3, Novosibirsk Mobile IRBM Base 2, and Verkhnaya Salda SSM Launch Position 10, each of which is in an early stage of construction.

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2. NPIC SR-053/77, *Additions to the Soviet SS-X-20 Single-Bay Garages (S),* Jul 77 (TOP SECRET RUFF 25X1 25X1
3. NPIC PIR-017/77, *Possible SS-X-20-Associated Command and Control Silo Under Construction at Kapustin Yar, USSR (TSR),* Aug 77 (TOP SECRET RUFF 25X1 25X1
4. NPIC PIR-034/77, *SS-X-16/-20 Mobile Missile-Related Activity, USSR, 21 July—30 September 1977 (TSR),* Nov 77 (TOP SECRET RUFF 25X1 25X1

REQUIREMENT

Project 121300NF

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List of Conversion Factors by Classification

UNITS OF LENGTH

IF YOU HAVE	*MULTIPLY BY*	*TO OBTAIN*
MILLIMETERS	0.0394	INCHES
CENTIMETERS	0.3937	INCHES
INCHES	25.4000	MILLIMETERS
INCHES	2.5400	CENTIMETERS
FEET	0.3048	METERS
FEET	0.0003	KILOMETERS
YARDS	0.9144	METERS
METERS	3.2808	FEET
METERS	0.0005	MILES(NAUTICAL)
METERS	1.0936	YARDS
KILOMETERS	3280.8400	FEET
KILOMETERS	0.6214	MILES(STATUTE)
KILOMETERS	0.5400	MILES(NAUTICAL)
MILES(STATUTE)	1.6093	KILOMETERS
MILES(NAUTICAL)	6076.1154	FEET
MILES(NAUTICAL)	1.8520	KILOMETERS
MILES(NAUTICAL)	1852.0000	METERS

UNITS OF AREA

IF YOU HAVE	*MULTIPLY BY*	*TO OBTAIN*
SQUARE CENTIMETERS	0.1550	SQUARE INCHES
SQUARE INCHES	6.4516	SQUARE CENTIMETERS
SQUARE FEET	0.0929	SQUARE METERS
SQUARE YARDS	0.8361	SQUARE METERS
SQUARE METERS	10.7639	SQUARE FEET
SQUARE METERS	1.1960	SQUARE YARDS
SQUARE METERS	1.0000	CENTARES
SQUARE METERS	0.0002	ACRES
SQUARE METERS	0.0001	HECTARES
ACRES	4046.8564	SQUARE METERS
ACRES	0.4047	HECTARES
HECTARES	10000.0000	SQUARE METERS
HECTARES	2.4711	ACRES

UNITS OF MASS

IF YOU HAVE	*MULTIPLY BY*	*TO OBTAIN*
KILOGRAMS	2.2046	POUNDS(AVOIR.)
POUNDS(AVOIR.)	0.4536	KILOGRAMS
SHORT TONS	0.9072	METRIC TONS
METRIC TONS	1.1023	SHORT TONS
METRIC TONS	0.9842	LONG TONS
LONG TONS	1.0160	METRIC TONS

UNITS OF VOLUME

IF YOU HAVE	*MULTIPLY BY*	*TO OBTAIN*
LITERS	0.2642	GALLONS
LITERS	0.0063	BARRELS(POL)
LITERS	0.0010	CUBIC METERS
GALLONS	3.7854	LITERS
GALLONS	0.1337	CUBIC FEET
GALLONS	0.0238	BARRELS(POL)
GALLONS	0.0038	CUBIC METERS
BUSHELS	0.0352	CUBIC METERS
CUBIC FEET	7.4805	GALLONS
CUBIC FEET	0.1781	BARRELS(POL)
CUBIC FEET	0.0283	CUBIC METERS
CUBIC YARDS	0.7646	CUBIC METERS
BARRELS(POL)	158.9873	LITERS
BARRELS(POL)	42.0000	GALLONS
BARRELS(POL)	5.6146	CUBIC FEET
BARRELS(POL)	0.1590	CUBIC METERS
CUBIC METERS	1000.0000	LITERS
CUBIC METERS	264.1721	GALLONS
CUBIC METERS	35.3147	CUBIC FEET
CUBIC METERS	28.3776	BUSHELS
CUBIC METERS	6.2898	BARRELS(POL)
CUBIC METERS	1.3080	CUBIC YARDS

[redacted]